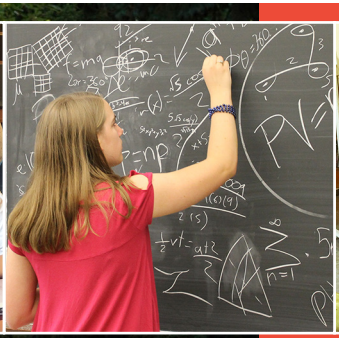
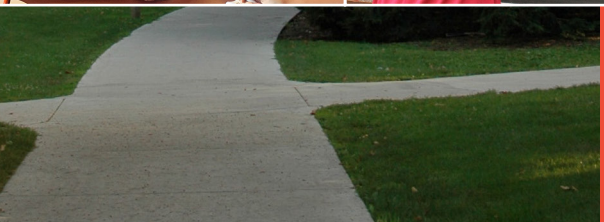
SUMMER ILLINOIS MATH CAMP





ILLINOIS
Mathematics
COLLEGE OF LIBERAL ARTS & SCIENCES

SIM CAMP EPSILON, JUNE 8-12, 2020

- For students starting 8th-10th grade Fall 2020, ages 12-15
- Open to students who will start algebra in the fall or have taken some algebra already

Classical Constructions: Learn to Draw Algebra. What can we do with a compass and a straightedge? These simple tools can be used to create shapes, do arithmetic, and prove fun facts about geometry. This course will teach students geometry as the ancient Greeks saw it, using only tools that were available then.

Counting to Infinity (Plus One!). Is infinity a number greater than all other numbers, or is it the size of a set that is larger than all finite sets? Are these two notions the same, and how do we make them mathematically rigorous? In this course, students will learn how to show that different infinite sets have different sizes; indeed, some infinities are bigger than others! Along the way we will develop the basic elements of set theory and grapple with notions of orderings on infinite sets and maps between sets.

SIM CAMP DELTA, JUNE 22-26, 2020

- For students starting 10th-12th grade Fall 2020, ages 15-18
- Open to students who have taken at least one year of algebra

Classical Constructions: Learn to Draw Algebra. What can we do with a compass and a straightedge? These simple tools can be used to create shapes, do arithmetic, and prove fun facts about geometry. This course will teach students geometry as the ancient Greeks saw it, using only tools that were available then. This is a more advanced version of the corresponding Epsilon course.

Counting, Coloring, and Graphs. In combinatorics, mathematicians answer the question "How many?" through various methods. They also study objects called graphs, which are sets of vertices connected by edges. Campers will learn about properties of graphs, coloring the vertices and edges of graphs, and how mathematicians count.

FREQUENTLY ASKED QUESTIONS

Do I need to be on math team to enjoy SIM Camp?
No! While some of the topics will be similar to some competition math, most of it will be different. The focus will not be in solving problems quickly and alone. Instead, the problems that we do in camp can be open ended, and often have more than one solution. Campers spend a lot of time working in groups to discuss problems and come up with solutions together. Thus, having many different perspectives helps the group solve problems better!

Do I need to have good grades in math class to participate in SIM Camp?
We are looking for students who are enthusiastic about math, and this does not always mean getting good grades. If you like making sense of ideas, looking for patterns, and figuring out why things work, SIM Camp is for you!

Is SIM Camp a good place to get tutoring or get ahead in school over the summer?
SIM Camp is not a tutoring program or summer school. It is an opportunity to play with fun mathematical ideas that are not usually covered in school.

How much does SIM Camp cost?
SIM Camp is $200/student, although scholarships are available. We provide students with lunch each day. Some reimbursement is available for daily travel costs to and from camp.

When will we hear about acceptances?
We do not consider applications until after April 15, and we start sending decisions by May 1. We will continue accepting applications until both camps are full.

Questions?
For more information, or if you have other questions about the program, please contact us at math-simcamp@illinois.edu.

APPLICATIONS

To apply, visit our website at math.illinois.edu/SIM.

SIM Camp is $200/student with scholarships available. Lunch will be provided.

Priority deadline to apply is April 15, 2020.

ABOUT SIM CAMP

Organized by graduate students, the Summer Illinois Math (SIM) Camp is a week-long math day camp for middle and high school students hosted by the Department of Mathematics at the University of Illinois at Urbana-Champaign.

Campers will see the creative, discovery-driven side of mathematics. By showing them some of the ways mathematicians approach problems, SIM Camp hopes to encourage students to continue studying mathematics beyond the high school level.

SPONSORS

Mathematical Association of America

Department of Mathematics, the Illinois Geometry Lab, and the Association for Women in Mathematics at the University of Illinois at Urbana-Champaign

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